

PATENT 514413-3669

thereof in an anti-sense orientation operatively linked to a regulatory sequence, said second nucleic acid providing reduced levels of endogenous chloroplastic glutamine synthetase activity upon expression of said anti-sense RNA in said cell.

- 13. (Thrice Amended) A gene construct comprising:
- (a) a nucleic acid encoding a polypeptide comprising a prokaryotic ammonium specific asparagine synthetase, type A, linked at its N-terminus to a chloroplastic leader peptide sequence for import of the prokaryotic ammonium-specific asparagine synthetase, type A, into the chloroplasts or plastids of a plant cell, wherein said nucleic acid is operatively linked to a regulatory sequence for expression in said plant cell, and
- (b) a second nucleic acid for expression of an anti-sense sequence that encodes RNA molecule that is complementary to an endogenous chloroplastic glutamine sythetase gene or portion thereof, operably linked to a regulatory sequence for expression of the anti-sense RNA in the plant cell.
- 14. (Thrice Amended) A gene construct according to claim 13, wherein the prokaryotic ammonium-specific asparagine synthetase, type A, polypeptide coding region is linked at its N-terminus to a modified transit peptide having an amino acid sequence MASMISSSAVTTVSRASRGQSAAVASSSAVTTVSRASRGQSAAVA (SEQ ID NO: 5).